

RETURN FUEL LINE

FIT KIT

INSTALLATION

MANUAL



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RETURN FUEL LINE INSTALLATION

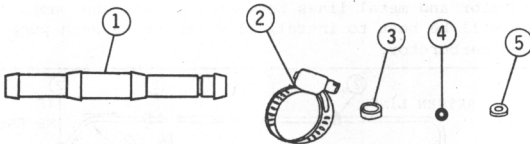
NOTE: The Fuel Return Line Restrictor/Adapter and Instructions, have been added to your driving computer system to circumvent problems in a limited number of vehicles. It is not necessary to install this device unless you encounter one or more of the following problems.

1. The return line exits directly from the carburetor so flow sensor must sense both fuel used as well as returned fuel
2. The line between the pump and carburetor (after the return line take off point) is armored or otherwise inconvenient to cut, making it necessary to install flow sensor before the pump.
3. The flow sensor is mounted conventionally, but indicates excessive fuel flow at idle do to pump pressure surges. Because of inadequate return line restriction, fuel is forced passed the sensor toward the carburetor and allowed to drain back through the return line, giving higher and inaccurate readings.

CAUTION: For carburetor equipped vehicles only. Do not use on EFI or Diesel engines.

PARTS LIST

<u>ITEM</u>	<u>PARTS NO.</u>	<u>DESCRIPTION</u>	<u>QUANTITY</u>
1	4790	Adaptor Ass'y (with .2mm Restrictor)	1
2	3754	Hose Clamps	3
3	3784	Restrictor 0.5mm	1
4	4679	O'Ring 1.4x4.4x1.6mm	1
5	3624	Washer 2.3x4.8x1.2mm	1



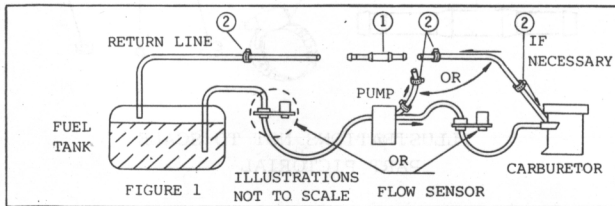
ILLUSTRATIONS NOT TO SCALE
PART PICTORIAL

TYPICAL FLOW SENSOR INSTALLATION FOR VEHICLES THAT INCLUDE FUEL RETURN LINES

Location of flowsensor between tank and pump, or between pump and carburetor.

NOTE:

Applications: 1. Typical gasoline engine vehicles with return lines attached to the carburetor or gasoline engine vehicles with return lines from the fuel pump where it is convenient to have the flow sensor between the pump and tank, may be installed as shown in Figure 1. 2. Vehicles with the fuel pump in the tank or if hose lines are used between the pump and carburetor and metal lines between the tank and pump, it will be best to install flow sensor between pump and carburetor.



INSTALLATION:

1. Be sure of your selection of the return versus main fuel line. The line to the carburetor can usually be identified by direct tracing to the pump. The fuel filter is also a clue if pump is near or in the tank, as it is always in main supply line.
2. Install the flow sensor so that it is supported in a level position as recommended in the manual supplied.
3. Cut the return line where the Adaptor assembly is to be inserted.
4. Slide the clamps ② over the cut ends.

CAUTION: If the return line is not clamped where it leaves the carburetor (or fuel pump), the third clamp ② must be used to secure the return line at that carburetor (or pump).

5. Insert adaptor assembly and tighten clamps.

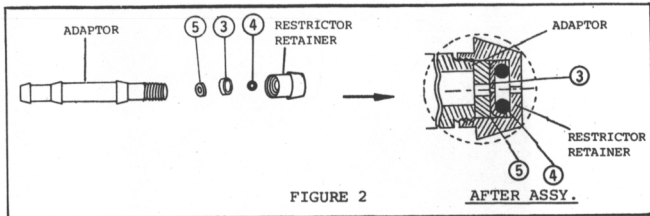
NOTE: The Adaptor will allow the transitioning of 5/16 inch to 3/8 inch hose size. If metal lines are encountered, additional hose and clamps may be necessary to make the installation, if not adequately covered in the trip computer hardware supplied.

6. When the installation is completed, start the engine and verify there are no leaks at the return line adaptor, flow sensor or carburetor.

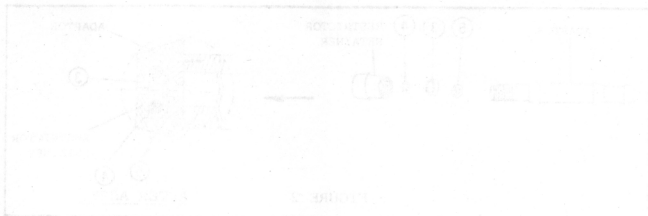
TROUBLE SHOOTING:

1. The restrictor provided will limit the return flow to approximately .3 gallons per hour as provided. If your vehicle requires greater flow, the orifice can be changed to a .5mm restrictor or enlarged by drilling out slightly. The following instruction describe how to change restrictors. Put an O'ring ④ into the larger holed restrictor ③, and insert as shown in the restrictor retainer. Then place washer ⑤ on top of O'ring and restrictor. Now screw and fix the adaptor onto the restrictor retainer. (See figure 2)

The largest restrictor hole should be adequate for all current vehicles with return systems. The smaller hole version is provided to help eliminate fuel flow sensor inaccuracy in the event the larger hole permits excessive fuel return.



2. Fuel starvation climbing long steep grades. Plug return line completely to check if you have a restrictor problem or some other problem. If problem continues, check the maximum gallons per hour (GPH) capability of your sensor. If OK, check pump. Normal sensor capacity is 15 GPH. 32 GPH sensors are available.
3. If your vehicle has a vapor lock problem, drill out the orifice to .06 inches (1.5mm), or locate the flow sensor between the pump and carburetor if the return line is from the pump, and eliminate the restrictor entirely.



fuel injection (including fuel system pressure) and return line components to check if you have a return system. If you do not have a return system, check the maximum delivery rate (GPH) capability of your sensor. If GPH exceeds pump capacity, your sensor is 15 GPH. If the sensor is

If your vehicle has a vapor lock (fuel-air mix) out of the fuel line (0.5mm) or larger, the flow sensor between the pump and catheter in the return line is the pump, and eliminate the restriction.

P/N 4325A
PRINTED IN TAIWAN